FROM APPRENTICES TO ACADEMICS: ARE NURSES CATCHING UP?

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ABSTRACT

In comparison to other disciplines, Australian Nursing has only come relatively lately to academia. Traditionally, academic qualifications were not viewed as necessary for nurses. The movement of nursing education to the tertiary sector has seen many changes from the traditional apprenticeship model and the characteristics of nurse-academics reflect these. The researchers identified changes that have occurred in the last five years in nurse-academics' qualifications, academic rank and links between them. It is clear that the goalposts for nurse academics have moved, with a master's degree now standard for Lecturer Level B and a doctorate for Level D. Other findings show a strong link between movement (transfer), increased qualifications and promotion. Females were more likely than males to have increased their qualifications and to be promoted. In terms of academic qualifications in the whole system, female nurse-academics have caught up with their counterparts in the former CAE sector. Male nurse-academics have parity with female nurse-academics but not with males in the system generally. The study shows the great strides that Australian nurse-academics have made in the five years preceding the end of the old millenium but illustrates that they and female academics generally have not yet caught up to their male colleagues.

Key words: qualifications, promotion, academic rank, gender, nurse-academics

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INTRODUCTION

As the millennium approached, nursing education (excluding pilot programs) celebrated its fifteenth year as a discipline in academia and its tenth year in the Unified National System of universities (UNS). The end of the millennium was therefore an appropriate time to provide baseline data for nurse-academics' qualifications and academic rank at the beginning of the 21st century and to compare them with those of an earlier study (Roberts 1996). Therefore, the purpose of the study was to profile the nurse-academics' professional characteristics at the turn of the century and document changes in these factors since 1994. A further purpose of the study was to document the movements of nurse-academics within, into and out of the system, specifically promotion, resignation, retirement, new appointments, transfer to a new institution, and death. In this way, changes in the population of nurse-academics within the last five years of the old millennium could be documented.

PREVIOUS FINDINGS

The only previous research on Australian nurse-academics' professional characteristics to be found in the literature was by Reed (1994) and Roberts (1996). Reed found that most academics were female, appointed at lecturer level or below, under-represented at senior academic ranks, and under-qualified for their academic rank

compared to academics in other disciplines. Roberts found that in 1994 there were 1100 nurse-academics, employed in 27 universities, distributed relative to the population of the states' and territories' university student population. She found that male nurse-academics were over-represented at 17% compared to the general nurse workforce. Roberts also found that nurse-academics were under-represented at senior levels, with only one-half the proportion of Level Cs and just over one-quarter the proportion of level D and Es. She found that only seven per cent had doctorates, compared with 30% of academics in universities with nursing courses and 41% of academics in all universities. Roberts also found that approximately half of nurse-academics had their primary qualifications in their own discipline, with most of the remainder qualified in arts, education, and the sciences. There was a tendency for senior nurse-academics to have their basic qualifications in other disciplines, and there was an emphasis on education degrees at the masters level. The industry standard qualification for professors was a doctorate while for associate professors and senior lecturers it was a master's degree. Approximately one-quarter of nurse-academics held a specific teaching qualification, while almost half had a clinical qualification. Approximately one-third belonged to the Royal College of Nursing, Australia, while one-tenth belonged to the New South Wales College of Nursing.

Previous work on academic rank in general (Anderson et al 1997, DETYA 1999) showed that female academics were clustered in the lower academic ranks, even when doctorates were controlled. Anderson et al found that there was a 'linear decline of doctorates with rank', and that there was a rise in the proportion with doctorates from 1992 to 1996. They also found that 'Other Health Sciences', which excludes medicine

and dentistry and of which nursing is the largest group, had at approximately one-fifth, the third lowest percentage of doctorates (21%) in 1996. This exceeds only law and built environment and falls well below sciences at 83%. Since more detailed statistics from DETYA (1999) and Anderson et al 1997 will be used in the results section for a comparison, they will not be described here.

METHODOLOGY

The present study was an extension of Roberts' (1996) study of nurse-academics. Information was accessed by means of staff lists from University websites. Websites were checked for recency of information. Where recency was less than six months, personal contact was made with the appropriate nursing department. After obtaining ethics clearance from the Northern Territory University Human Ethics Committee, senior academic staff of nursing departments were contacted to confirm the website information and identify recent changes in staffing and qualifications. Email questionnaires were sent to individuals for whom information could not be obtained through the website or from the senior academics.

The researchers then updated the 1994 database, which listed every full-time nurse-academic in Australian universities at that time. In doing so, new nurse-academics who had joined the faculties were added and those who had left them were removed. It was not possible to include persons who both joined the system and left between the two data collection points. In this study, Avondale College was not included since it is not part of the Unified National System (UNS) and those few academics from Avondale in the 1994

study were removed from the database. Two new university faculties, Adelaide and Melbourne were included in this study.

The researchers also tracked nurse-academics' movements within the system. Specifically documented were: transfers to other universities, movement to non-nursing faculties, promotion to the upper echelons of university management, resignation, retirement and death. No attempt was made to distinguish reasons for resignation, such as redundancy or early retirement packages.

For all nurse-academics, gender, highest academic qualification, teaching qualifications, academic rank, employing university and geographical location of employment were documented. For nurse-academics who had remained in the system from 1994, promotion and/or upgrade in qualifications since 1994 were also documented. Validity was addressed by collecting data on at least 95% of the population for every variable.

In calculating promotion, those at Level E were excluded because they were already at the top of the academic rank. New nurse-academics were also excluded because they came from another system and promotion within the university was irrelevant to this study. However, some few may have joined the system and been promoted within the last five years, and these would not have been identified by means of the methodology used.

In calculating upgrades in qualifications, new nurse-academics were again excluded because it was reasonable to assume that they came into the system with that qualification. Some, however, may have upgraded after entering the system and before the data collection period, but considering the length of time it takes for full-time

employees to complete a higher degree part-time, very few would have been in that category. These, too would not have been identified by means of the methodology of this study.

In the end, two databases were constructed for the purposes of data analysis. The 1999 database comprised the 1999 population as described above. The second database included both the 1994 and 1999 data to facilitate statistical analysis of the differences in the two cohorts and individuals' data were classified according to year of data collection.

Frequency distributions were calculated in order to describe the subgroups in the population and contingency tables and t-tests were performed to test for interactions among subgroups. Since this was a population study, inferential statistics will not be presented.

In order to compare the results of Anderson et al with those of this study, their 1996 figures were extrapolated to 1999. There were unfortunately no later figures available for qualifications of university staff.

RESULTS

The survey of the documents and the WWW showed that there were 901 nurse-academics working full-time in Australian universities in 1999. Of these, 17% were males, a decrease of 1% from 1994. In 1996, males comprised only 8% of the general nursing workforce, (AIH&W 2000) which suggests that they are over-represented in nursing academia. The highest percentage of female nurse-academics was in ACT and

the NT (100%) with Queensland (91%) well above average. NSW, Victoria, SA and WA had over 80% females. Tasmania had the highest proportion of males (28%).

Highest Qualifications

Over all, most (82%) nurse-academics in 1999 held postgraduate qualifications, a rise of 16% from 1994. Figure 1 shows the highest academic qualifications in 1999. The percentages of doctorates in nursing was almost one-fifth, with 96% of these being a PhD as opposed to a professional doctorate. The majority held a master's degree and fewer than one-quarter held a bachelor's degree as their highest qualification. Almost no-one now holds a hospital certificate (n=3) or a postbasic diploma (n=3) as the highest qualification.

Approximately half of the nurse-academics reported clinical qualifications. Midwifery was the most common clinical qualification (30%), followed by high dependency (12%) and psychiatric nursing (10%). These figures are within one percent of the 1994 figures for these clinical qualifications. In 1994, 5% held graduate diplomas in nursing and health while 33% did in 1999. Similarly, in 1994, 11% held masters degrees in nursing and health while in 1999 25% did. This represents a strong rise in tertiary clinical qualifications.

Since 1994, the proportion of nurse-academics with doctorates as their highest qualification almost trebled and the proportion with a master's rose by almost half (See Figure 1). Half of the females increased their qualifications while only just over 1/3 of

males (38%) did. A comparison of states and territories showed that South Australia had the highest proportional increase in qualifications (59%).

Not only was there a dramatic rise in qualifications, there was a change in the discipline in which nurse-academics obtained their qualifications. The proportion with a bachelor's degree in nursing or health rather than other disciplines rose by 5% to 51%. The change was much more marked for master's degrees, which doubled from 33% to 67% in nursing or health.

A relevant comparison for nurse-academics is with national figures for the former CAE sector academics. Figure 1 shows the highest qualification of nurse-academics in 1994 and 1999 compared with rates in the former CAE sector for 1994 and extrapolated from Anderson et al (1997) for 1999.

Figure 1 shows that for masters' degrees, nursing has caught up to, and indeed surpassed, the former college sector. However, the percentage of doctorates in nursing was only about half of what it was expected to be for the former CAE sector academics. If the surplus masters' degrees in nursing were converted to doctorates, the deficit of doctorates would disappear.

There was no relationship between qualifications and gender in nursing, with equivalent proportions of males and females at each qualification level. This is in contrast to the former CAE system academics generally, in which males have almost double the proportion of doctorates as females but correspondingly fewer have lesser degrees as their highest qualification (Anderson et al 1997). Therefore, male nurse-academics are comparable to the female nurse-academics rather than males in the system generally. This relationship is shown in Figure 2.

In nursing, the proportion of females with doctorates is almost equivalent to female academics in the former college sector, but the proportion with master's degrees is higher.

In terms of educational qualifications, 12% had a Diploma of Nursing Education (DNE), while 11% held a Bachelor of Education and one-fifth held a Master of Education. There was a decrease in DNEs and an increase in education degrees since 1994.

Professional Affiliations

Both the Royal College of Nursing and the NSW College of Nursing showed an increase in nurse-academic membership from 1994-1999. In 1999, over one-third of the nurse-academics (39%) had a Royal College of Nursing Australia (RCNA) postnominal, compared with 35% in 1994. Of these, two thirds were fellows and one-third members. Eighteen per cent belonged to the NSW College of Nursing in 1999, compared with 10% in 1994. Half of these were fellows. This is, if anything, an underestimate because not all nurse-academics necessarily showed their postnominals in their staff lists.

Persons who belonged to one college were more likely to belong to the other than those who did not belong to a college. Half of those who belonged to the NSW College of Nursing also belonged to the Royal College of Nursing, Australia, whereas only 38% of those who did not belong to the NSW College of Nursing belonged to the RCNA. The reverse association was not investigated since people in other states would not be likely to belong to a state-based organisation in New South Wales.

Those academics at the upper levels were more likely to belong to a professional college than those at the lower levels. One-third of lecturers, one-half of senior lecturers and two thirds of the professoriate belonged to the RCNA. For the NSW College of Nursing, thirteen percent of lecturers, one-quarter of senior lectures and almost a third (31%) of the professoriate were members.

Academic Rank

In 1999, two-thirds of nurse-academics were at Lecturer level (Level A and B). Almost one-quarter were at Senior Lecturer level (Level C) while few were in the professoriate (Level D and E) (See Figure 3). Figure 3 shows that the percentage of nurse-academics in senior academic ranks rose slightly during the five-year period.

In 1994, nurse-academics were under-represented at the higher academic ranks in comparison to their colleagues in universities with nursing courses. Although progress had been made by 1999, this disparity still exists, as seen in Figure 4.

Figure 4 shows that the nursing professoriate still comprises a much lower proportion of academics than in the group of universities that have nursing courses. However, when compared with the female professoriate in those universities, nurse-academics are equivalent (See Figure 5). The picture for senior lecturers is similar. Male nurse-academics have academic rank equal to female nurse-academics in the professoriate. However, they lag behind the males in the other parts of the system.

It is also a feature of these demographics that nurse-academia has a lower proportion of Associate Lecturers than in the system generally.

In 1999 as in 1994, there was a strong relationship between highest qualification and academic rank (See Figure 6). As expected, most nurse-academics in the professoriate have doctoral degrees and the majority of those at the senior lecturer and lecturer level have master's degrees. A bachelor's degree is now associated with the associate lecturer level.

Nurse-Academics on the Move

Promotion

Of those who had been in the system since 1994, and who were eligible for promotion, only one-fifth were promoted. Females were more likely than males (50% vs 38%) to be promoted. Victoria was the state 'on the move' with the highest rate of promotions (23%). Promotion within one's own institution was less common than by transfer. Figure 7 shows the promotions to the various academic ranks.

Figure 7 shows that of the promotions, almost half were to Level C, while just over one-fifth were promoted to Level B. Just under one-third were promoted to the professoriate, with slightly more being promoted to Associate Professor than Professor. Almost no-one (0.02%) raised their academic rank by two levels, either by being promoted twice within the span of the study or by accelerated promotion. The majority of these were to Level E. In summary, few were promoted, and of those who were, the promotions were mainly at the lower end of the system.

There was a very strong link between promotion and highest qualification. Only one-tenth of those promoted held a bachelor's degree. A master's degree was the most common qualification for promotion to both Level B (61%) and Level C (59%). However, over one-third of those promoted to Level C (38%) had a doctorate. Almost two-thirds of those promoted to Level D (62%) and most of those promoted to Level E (84%) had a doctorate.

There was also a strong link between promotion and obtaining a higher qualification. Of those who were promoted, over two-thirds (69%) had increased their qualifications in the last five years. Of those who increased their qualifications, just over a quarter (27%) were promoted, but of those whose qualifications remained static, only one-tenth (11%) were promoted.

Movements Into and Out of the Nursing Faculty

In 1994, there were 1108 nurse-academics. Just over one-third (37%; n=402) of staff left the system from 1994 to 1999. Of these, most (83%) were resignations. The remainder retired (12%), transferred to other faculties (3%), moved to upper echelons of the university (1%) or died (1%). After the new staff were added, there were 901 staff in positions, which indicates a loss of just under one-fifth (17%) of jobs over the five year period.

Of the people in the system in 1999, approximately two-thirds (68%) had not moved out of their faculty, one-quarter were new appointees, and 7% were transferees. Females comprised 88% of new appointees which was a higher proportion than the 83%

overall. A quarter of the transferees were male, 8% higher than the proportion of male nurse-academics. Victoria was again the state 'on the move' with the highest proportion (42%) of transferees into the state and of new appointees (34%). New South Wales and Victoria had the highest proportion (28% each) of resignations, while New South Wales had the highest proportion of retirements (38%) deaths (67%), movements to other faculties (64%) and movement to upper echelons of the university (50%).

There was a clear link between transferring to a new position and promotion. Of those who stayed in their 1994 institution of employment, only a few (16%) were promoted. However, the majority (60%) of transferees achieved promotion.

There was also a link between movement and academic rank. A higher proportion of Level Bs and a lower proportion of Level Cs left the system than would have been expected on average, while a higher proportion than expected of Level As were new. The professoriate was stable. In other words, the movement is at the lower end of the system, with a trend to people being hired at the lower academic rank, and by inference with lower qualifications.

Finally, there was a link between movement and highest academic qualification. Fewer than half of the new appointees had a master's degree, compared with almost two-thirds (64%) of those who had been in the system for at least five years. However, slightly more of the new appointees than those who had remained in the system had a doctorate (18% vs 15%). Higher qualifications and an increase in qualifications were both positively related to transfer to other institutions. Comparatively more transferees held a doctorate (58%), and fewer (34%) held a master's degree than those who did not transfer. Virtually no transferee (2%) held a bachelor's degree as a highest qualification.

Almost two-thirds (64%) of transferees had increased their qualifications in the last five years, compared with just under half (47%) of those who did not move.

In summary, the nurse-academic workforce has downsized by one-fifth, with most losses due to resignations rather than retirement or death. New appointments tended to be at a lower academic rank. The proportion of nurse-academics with a doctorate has almost trebled, and the most common qualification is now the master's degree. There has been a movement upwards in academic rank. There were strong links between movement and promotion, and movement and highest academic qualification. Those who moved were more likely to be promoted and to have increased their qualifications during the last five years. Promotions were mainly from Level B to Level C. Females were more likely to increase their qualifications and to be promoted or be new appointments, while males were more likely to transfer to other institutions.

DISCUSSION

Qualifications: Moving the Goalposts

Nursing academic qualifications have risen markedly over the past five years. Findings of this study show that few academics now hold only a Bachelor's as their highest degree, the Masters is now the most commonly held degree and the number of nurse academics holding doctorates has almost trebled. This is in line with the general increase in academic qualifications in the UNS generally.

Staff who have been in the system since 1994 have substantially increased their academic qualifications. More than half of female nurse-academics and a third of male nurse-academics increased their qualifications during that period of time. This was

arguably in spite of a high personal cost in a time of increasing workloads due to downsizing. Despite being the centre of the family function (NH&MRC 1995), and thus arguably more likely to take time out for child bearing and child rearing, proportionally more women than men increased their qualifications.

This study also showed a substantial rise in the numbers of nurse-academics choosing to increase their qualifications within their own discipline, particularly clinically based qualifications such as graduate diplomas. These clinical qualifications have traditionally been hospital-based but are becoming increasingly tied to graduate certificates and diplomas and masters degrees.

This may be due in part to increased opportunities for nurses to pursue their studies in health related areas. However, it could also be representative of a coming of age in nursing as a discipline whereby higher degrees in nursing are seen as valid and credible. Another factor may have been a recognition that a qualification in one's own discipline is necessary to achieve comparability and credibility with colleagues in other disciplines, who have a longer tradition of achieving qualifications within their own discipline.

The data show a movement of the goalposts in relation to qualification expectation for the various academic ranks. Five years ago, the industry standard was a bachelor's degree for Level B, a master's degree for Levels C and D, and a doctorate for Level E. In 1999, the industry standard has been raised to a master's for Level B and a doctorate for level D. Nursing academia is now in line with the industry standard for the professoriate. This upward shift for Levels B and D is in part likely due to heightened expectations of nurse academics given that a PhD is standard at Levels B and C in traditional tertiary disciplines. It may be that in ten years time the standard for Level Bs will be a doctorate.

The increase in professional affiliation may represent an increased sense of professional maturity and a recognition of professional responsibility. Peer pressure and status considerations may also play a role. These factors may also be operating to influence the positive relationship between academic rank and professional affiliation. This latter finding, however, may also relate to the increased salary level of the higher academic ranks which renders professional affiliations more affordable.

Downsizing or Rightsizing?

The nursing academic group was downsized by a net loss of 17% of positions over a five-year period. In comparison, in the whole system, full time academics only downsized by 2% during the same period, despite a widely held perception of numerous job losses (DETYA 1999). However, this small apparent downsize obscured a 6% rise in the numbers of academics in the system between 1994 and 1996 and a subsequent fall of 8% between 1996 and 1999. Even so, nurse-academics obviously underwent a proportionally greater than average reduction in numbers. Whether they were disadvantaged or merely 'rightsized' is a moot point. They may have been used as 'shock absorbers' by the system to take more than their share of the overall loss due to high turnover. On the other hand, there may have been too many in the first place due to overestimation of need when the nursing programs were first set up. It is also possible, and certainly the researchers' impression from conversations with Deans of nursing, that attractive voluntary retirement 'packages' may have been a factor in the large number of resignations. In the authors' institution, for example, the staff who left took a 'package' that was enhanced by transfer of entitlements from the hospital system. Another possible

explanation is that the staffing patterns had shifted towards employment of contract staff (who were not counted in the data) or hospital secondments for clinical supervision. A comparison of staff-student ratios in the various disciplines might shed some light on the question, but the comparison would be difficult unless clinical supervision ratios could be removed from the equation.

Such a downsizing has serious implications for nursing academia as a whole. There has been an inevitable loss of education expertise, corporate knowledge and skills in research and supervision. It will take many years for replacements to gain the level of knowledge and fill the partial gap created by the loss of these staff.

Staff replacements have mainly been recruited at the lower end of the scale. This has probably occurred for economic reasons since their salaries are lower. However, replacements hired from the clinical facilities are more likely to have recent clinical experience and to bring 'fresh blood' to the organisation. Despite the influx of staff at the lower end of the academic ranks, in general the proportions of staff at the upper levels rose since 1994, presumably due to promotions.

Academic Rank

The proportion of nurse-academics at all academic ranks is now equal to that of females in universities that have nursing courses. However, female academics in general are under-represented in the professoriate. The reflection of the overall picture for female academics is not surprising considering the preponderance of females in nurse-academia. The resemblance of the academic rank of male nurse-academics to female nurse-academics, rather than to male academics generally, suggests that with respect to

academic rank the male nurse-academics are more like the former than the latter. It could also be that male nurse-academics have not been in the system long enough to achieve parity with male academics in general.

The imbalance between Level B and Level A in nursing compared with other disciplines may be due to an inability to attract nurses to the university at the lower salary level because they can make a lot more money doing clinical work. The prestige of working at a university may not be enough to offset the reduction in remuneration involved in leaving the health agencies to work for the universities.

Movements

This study showed that female nurse academics were more likely to be promoted than their male counterparts. This is probably linked to the fact that females were also more likely to increase their qualifications, which was a key factor in promotion. The other key factor was mobility. However, despite the finding that males were more likely to transfer to another institution, and that promotion was linked to mobility, the males still did not achieve parity of promotion. This suggests that increase in qualifications was a more important factor than mobility in enhancing prospects of promotion. However, the strong link between transferring to a new institution and promotion supports the truism that it is easier to achieve promotion by moving to a new university than remaining at one's present one.

Of the nurse-academics who left the system, few were classified as retirees. However, the category of resignations may have masked some early retirements. There may have been few nurse-academics in the system who were over sixty years of age since

many older nurse-educators did not transfer when nursing education entered the tertiary system. Without access to the actual age of the participants of this study this was impossible to determine.

A strength of this study is that it provides benchmark data for professional characteristics of the population of nurse-academics at the turn of both the 20th century and the second millennium. A further strength is that it is an extension of Roberts' (1996), previous study on Australian nurse-academics and thus provides insights into the pattern of change, growth and expectation that have occurred for this group newly come to academia. In documenting individuals' changes of academic rank and qualifications, it built directly on Roberts' earlier work.

The study was dependent on the currency of the information; however, most websites had been updated fairly close to the beginning of the data collection period and staff lists obtained from contacts at the universities were current. The senior academics were very helpful in identifying reasons that individuals left their institutions. The completeness of the data for the whole population is also a strength of the study as it precludes any sampling bias.

Further research into movements out of the system could be productive, given the considerable percentage of nurse-academics who left the system in the last five years. It would be useful to repeat this study after an appropriate length of time to see if the nursing professoriate expands to meet the proportions of the system overall or remains at the same academic rank as female academics generally. Considering that the nurse-academics are now at parity with female academics in comparable institutions, any

advances from this point will likely reflect changes in the system rather than specific changes in nurse-academia.

In conclusion, this study has provided a longitudinal documentation of the movements of nurse-academics and the changes in their qualifications and academic ranks. It has shown that nurse-academics have caught up in these areas to female academics in other disciplines situated in the same educational context. It remains to be seen whether females will catch up to males in the Australian university system, thus addressing gender issues. It also remains to be seen whether the different educational contexts will approach parity. If either of these occurs then the effects will likely flow on to nursing academia.

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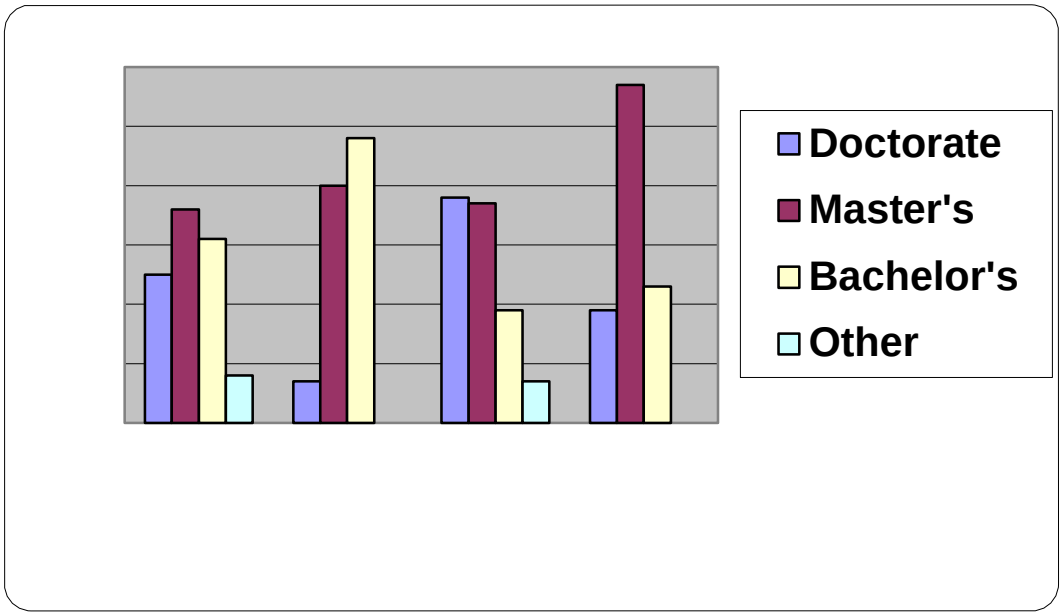


Figure 1: Nurse-academics and Former-CAE Academics: Highest Qualification 1994 and 1999, (%).

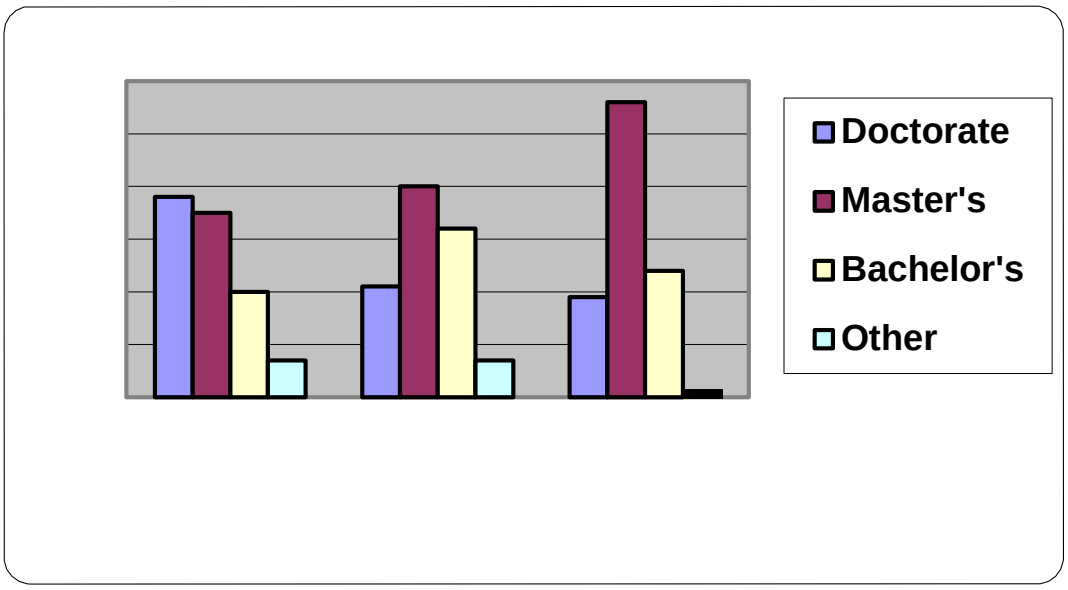


Figure 2: Qualifications and gender: nurses and academics from former CAEs, 1999 (%)

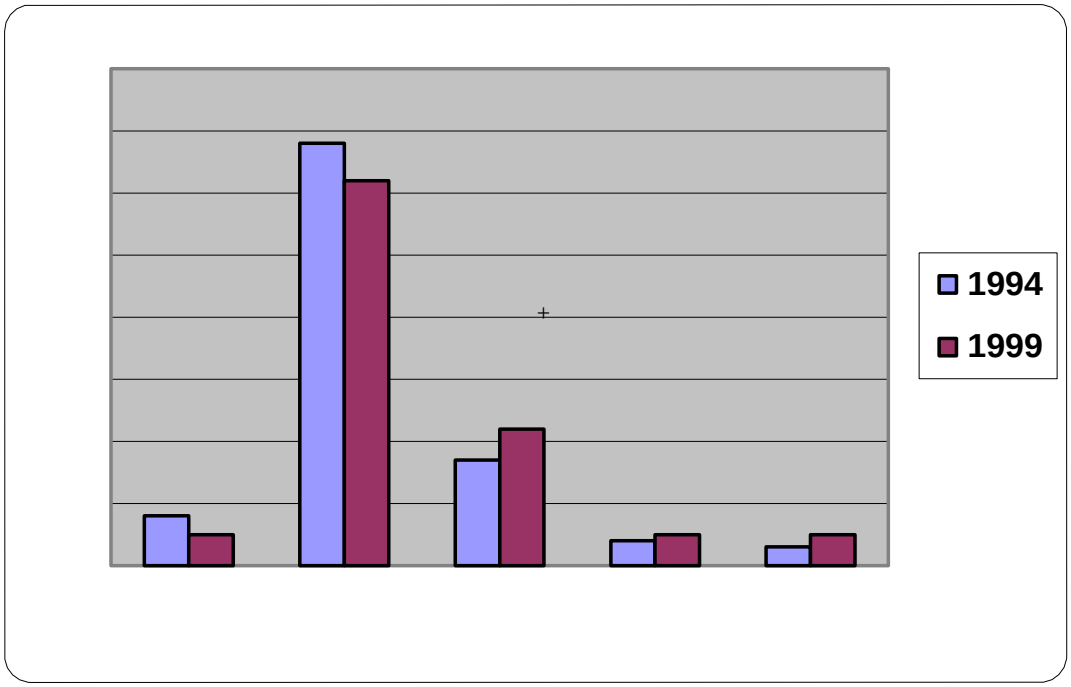


Figure 3: Nurse-academics' academic rank: 1994 and 1999 (%)

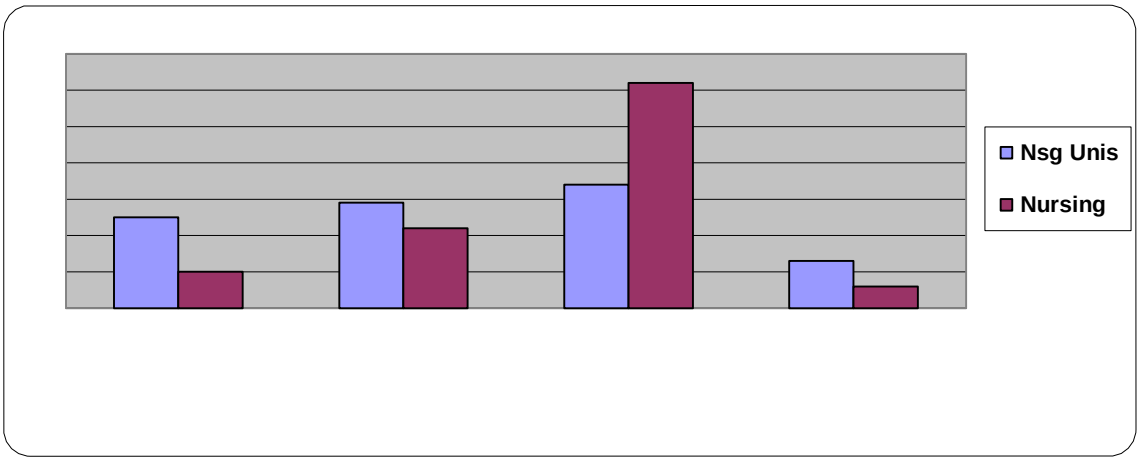


Figure 4: Nurse-academics and academics in universities with nursing courses: Academic rank 1999, (%)

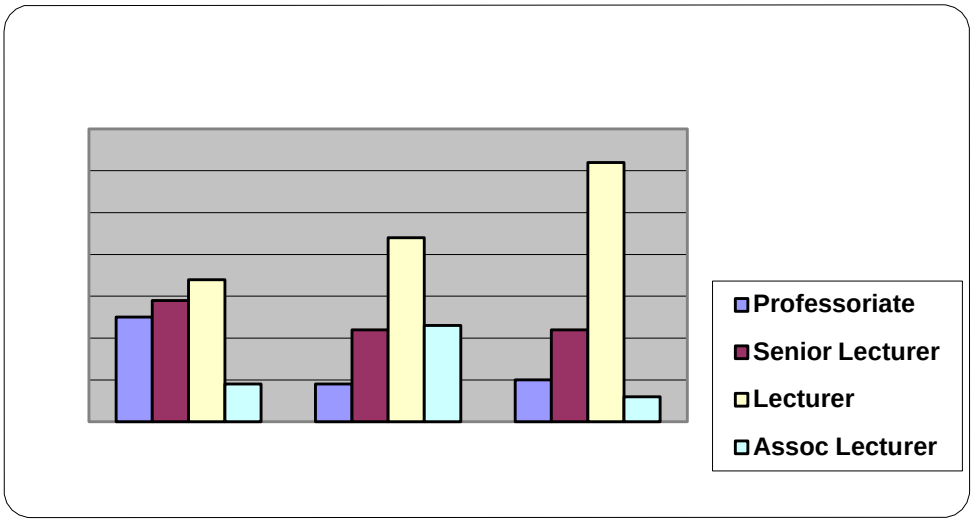
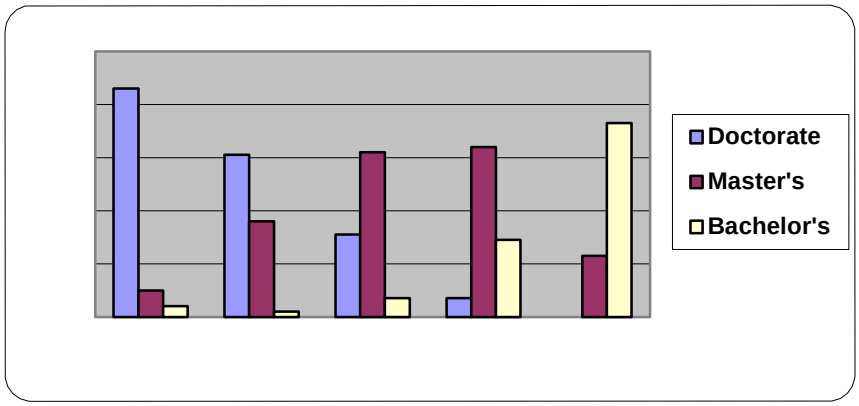


Figure 5: Academic rank and gender (%)



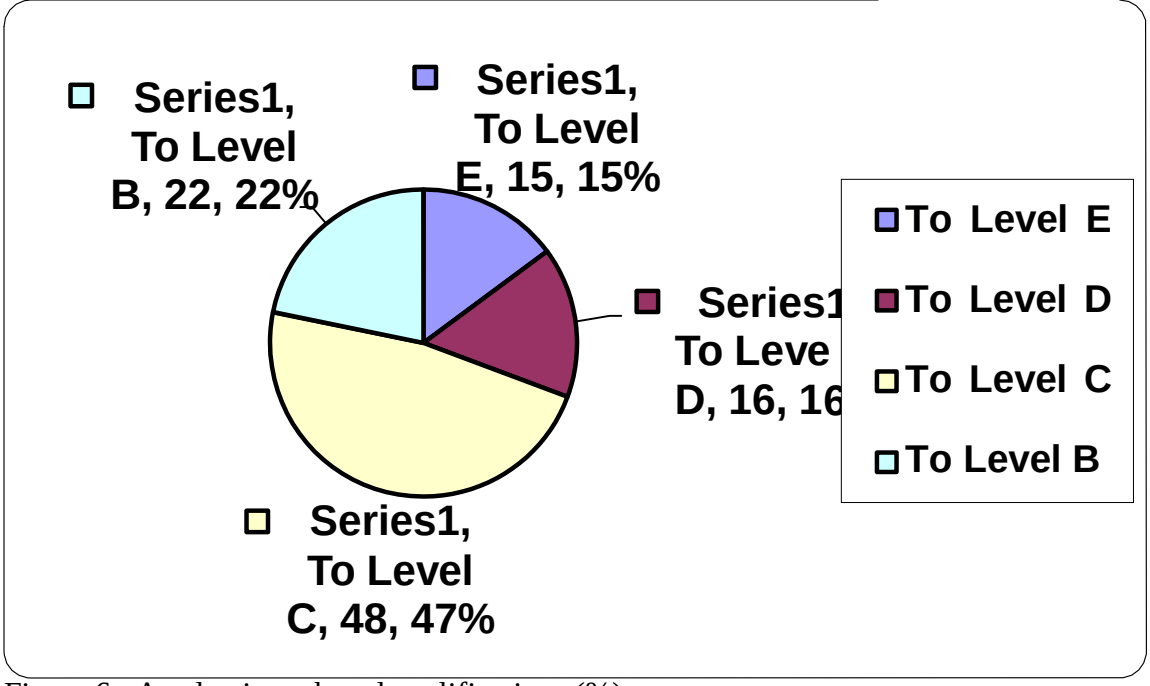


Figure 6: Academic rank and qualifications (%)

Figure 7: Promotion and academic rank(%)